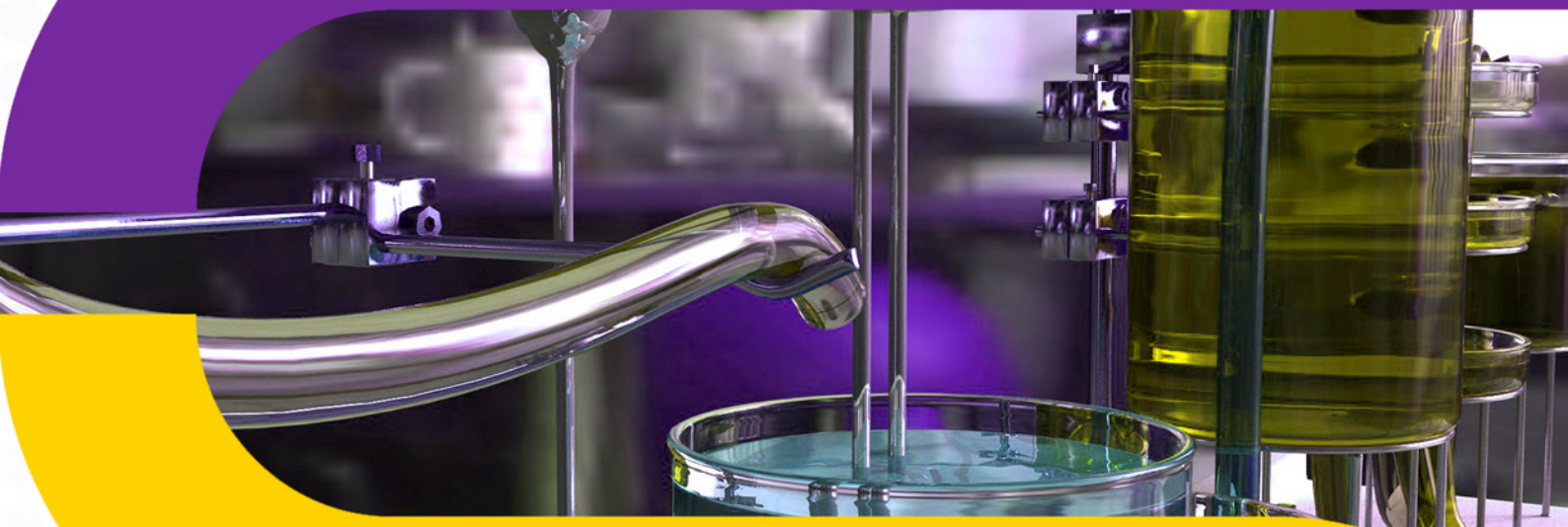
KGC

KGC RESOURCES

PROMOTIONAL PRODUCTS CATALOG

JULY - DECEMBER 2013



KGC RESOURCES SDN BHD

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03-33412880

KGC RESOURCES

ACKNOWLEDGMENT

MESSAGE FROM OUR MANAGEMENT

Dear Our Valued Customer and Business Partners,

Thank you for being our valued customers. We are grateful for the pleasure of serving you and meeting your laboratory equipment needs for the last two quarters. In this time of gratitude, we thank you for your continued support for trusting us and our products. Henceforth, we value your patronage and appreciate your confidence in us. Counting you among our customers is something which we are grateful for.

This year has been challenging, but we have overcome these challenges in triumph—with the help of you and your fellow researcher, engineers, and scientist. You have focused on the future rather than getting stuck in the day-to-day difficulties. You have worked hard allowing our business to thrive.

On behalf of the management and staff of KGC RESOURCES SDN BHD, we are once again grateful and thank you for your support and continuous loyalty to us. We hope that you will enjoy our promotion catalog and promise to offer you with much lower price and attractive Free Gifts or Cash Rebate for your future purchases.

Please feel free to browse our e-product catalog and e-promotion catalog on ***www.kgcscientific.com*** and/or ***www.kgcresources.com***.

Thank you!

PROMOTION TERMS

THE EXCITEMENT HAS JUST BEGIN.

ALREADY HAVE EITHER THE DSLR CAMERA OR SMART PHONE OR TABLET? HOW ABOUT CASH REBATE OR GIFT CERTIFICATE!

FOR PURCHASE OF RM 120,000 AND ABOVE*

NIKON D3200 KIT
WITH 18-55 MM LENS

OR

ASUS VIVO TAB SMART
ME400CL-1B028W

OR

SAMSUNG GALAXY S4
16 GB

FOR PURCHASE OF RM 60,000 AND ABOVE*

GARMIN NUVI@2565LM

OR

GIFT VOUCHER WORTH OF RM 500

FOR PURCHASE OF RM 20,000 AND ABOVE*

RO WATER
PURIFICATION SYSTEM

OR REBATE FOR FUTURE PURCHASES**

TOTAL PURCHASE (RM)	REBATE VOUCHER (RM)
100,000	1,000
60,000	500
20,000	200
10,000	100
5,000	50

TERMS & CONDITIONS

1. Prices quoted is included of delivery, installation, training & commissioning within Klang Valley
2. Prices quoted are valid until 31st December 2013. KGC reserves the right to change the price without prior notice.

Note:

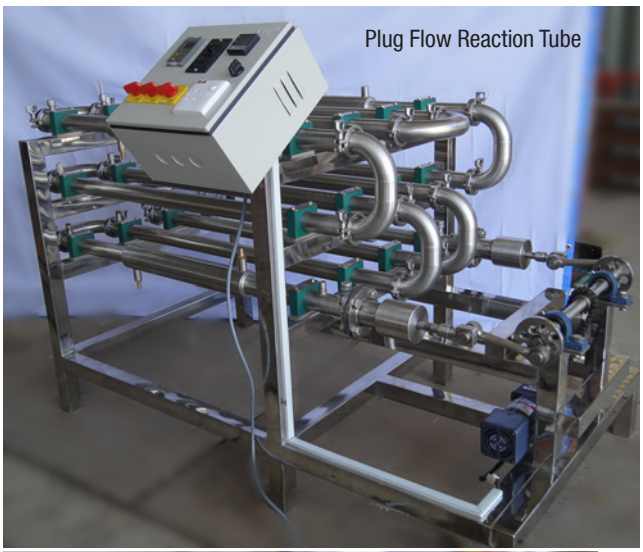
* KGC reserves the right to replace gift items of similar value in the event of unavailability of stock.

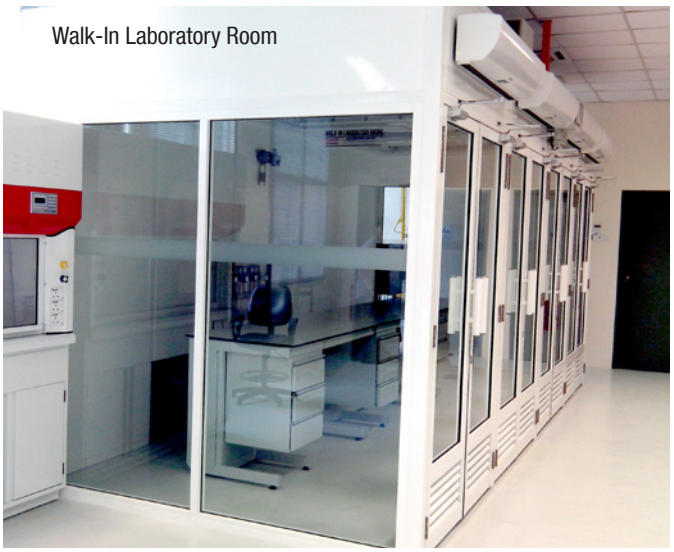
** Rebate Voucher. All Claims must be claimed before or on 31st December with proof of purchase documents.

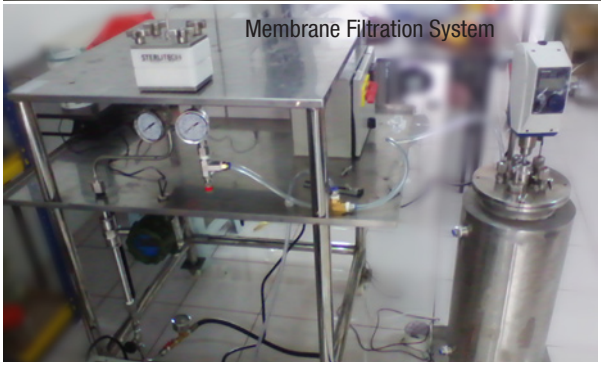
TABLE OF CONTENTS

ADVANCE MATERIAL SCIENCE		**4**
MTI	USA	4
HANTECH	KOREA	15
HARRICK PLASMA	USA	16
CORDOUAN TECH	FRANCE	17
OIL & GAS INSTRUMENTATION		**18**
IMR	USA	18
HTA	ITALY	18
GASTECH	AUSTRALIA	19
BIOTECHNOLOGY & LIFE SCIENCE		**20**
BE MARUBISHI	JAPAN	20
HEB	CHINA	21
BNF KOREA	KOREA	22
HYSC	KOREA	22
QUANTEK INSTRUMENTS	USA	23
LABORATORY EQUIPMENT		**24**
NEW ERA	USA	24
EBERBACH	USA	26
VACUUMER	KOREA	27
HAHN SHIN SCIENTIFIC	KOREA	28
SAMHEUNG ENERGY	KOREA	29
HYSC	KOREA	30
MTI	USA	31
SLI INSTRUMENTS	CHINA	34
NANOMATERIAL & SEMICONDUCTOR		**35**
LJUHV	TAIWAN	

CUSTOMIZED DESIGN


Plug Flow Reaction Tube


Walk-In Laboratory Room


Membrane Filtration System

KGC RESOURCES SDN BHD was formed to deliver innovative laboratory equipment designs to science and research industry. We have combined experienced and talented engineers to understanding end users' needs from developing the designs, fine tuning the mechanical works until the fabrication parts. Our engineers are young but talented and we pride ourselves in our tag line: STRENGTH THROUGH INNOVATION.

We have been involved in constructing Walk-In Laboratory Room, Plug Flow Reaction Tube, Membrane Filtration System, Corrosion Control Test, Heat Transfer System and many others in various fields that are related with research purpose. Any inquiry please feels free to contact us.

MUFFLE FURNACE

Muffle furnace (400°C-1800°C) steps in as the necessary part of laboratory that requires extreme heat environment. MTI is providing the muffle furnace at an affordable cost. The sizes of the muffle furnace are various from the smaller furnaces which are conveniently placed on a workbench, to the larger units that has a coveted capacity and competent for all duty.

KSL-1100X-S

KSL-1500X-S

KSL-1700X-A2

KSL-1200X-M

General Features:

- Double shell steel case
- High purity alumina fiber insulation
- PID automatic control and auto tune function temperature controller

Model	Chamber Dimension L x W x H	Volume	Heating Rate	Working Temperature	Heating Element	Power	Price
KSL-1100X-S	4" x 4" x 4"	1 L	Max: 30°C /min	Max: 1200°C (< 1 hour) Cont: 1100°C	Resistance Wire	700 W	RM 7,800
KSL-1200X-L	16" x 16" x 16"	64 L	Max: 20°C /min	Max: 1100°C (< 1 hour) Cont: 1000 °C	Resistance Wire	5000 W	RM 28,750
KSL-1200X-J	6" x 6" x 7"	4.2 L	Max: 30°C /min	Max: 1200°C (< 4 hour) Cont: 1100 °C	Resistance Wire	3000 W	RM 10,850
KSL-1200X	12" x 8" x 5"	7.2 L	Max: 50°C /min	Max: 1200°C (< 1 hour) Cont: 1100°C	Resistance Wire	3500 W	RM 15,895
KSL-1200-X-M	12" x 12" x 12"	27 L	Max: 10°C /min	Max: 1200°C (< 1 hour) Cont: 1100 °C	Resistance Wire	7000 W	RM 24,870
KSL-1500X-S	4.7" x 4.7" x 4.7"	1.7 L	Max: 20°C / min Cont: 10°C/min	Max: 1500°C (< 1 hour) Cont: 1400°C	Silicon Carbide	2000 W	RM 24,780
KSL-1700X-S	4.7" x4.7" x 4.7"	1.7 L	Max: 20°C / min Cont: 10°C/min	Max: 1700°C (< 3 hour) Cont: 1600°C	Molybdenum Disilicide	3000 W	RM 32,975
KSL-1700X-A1P	6" x 6" x 6"	3.6 L	Max: 20°C / min Cont: 10°C/min	Max: 1700 °C (< 3 hour) Cont: 1600 °C	Molybdenum Disilicide	4800 W	RM 48,165
KSL-1700-X-A2	8" x 8" x 8"	8.4 L	Max: 20°C / min Cont: 10°C/min	Max: 1700 °C (< 3 hour) Cont: 1600 °C	Molybdenum Disilicide	4000 W	RM 68,080

VACUUM CHAMBER FURNACE

Model	VBF-1200X-H8	VBF-1200X-H8-UL
Quartz Tube Size	8" O.D x 7.5" I.D.x 13.4" L	
Volume	7.6 L	
Working Temperature	Maximum 1100°C for 30 minutes and 1000°C continuously	
Features	• PID automatic control and auto-tune function • Stainless steel vacuum flange with one needle valve as gas inlet • One port for vacuum pump connection • Digital vacuum gauge provided	
UL Recognition	-	All electric components are UL recognized
Price	RM 54,840	RM 72,780

TUBE FURNACE

GSL-1100X

GSL-1100X-50-LVT

OTF-1200X-4-RTP

OTF-1200X-S

OTF-1200X-S50-2F

EQ-RTP-1000-LV3C

General Features:

- Heavy duty case
- High purity alumina fiber insulation
- PID automatic control and auto tune function temperature controller
- Quartz tube can stand heat until 1200°C with various diameter sizes offered
- SS304 vacuum flange with double high temperature silicone O-ring are included
- Two fiberous ceramic tube blocks are included for blocking heat radiation from inside tube

Model	Quartz Tube Option	Heating Rate	Working Temperature	Features	Advantages	Price
GSL-1100X	1" O.D. or 2" O.D.	Max: 20°C /min	Max: 1100°C (< 1 hour) Cont: 1000°C	Dial Vacuum Gauge	The chamber can be set up in vertical, horizontal, or at an angle	RM 14,285
GSL-1100X-50-LVT	1" O.D.	Max: 20°C /min	Max: 1100°C (< 1 hour) Cont: 1000°C	Digital Vacuum Gauge, Temperature Calibrator, Vacuum Pump and Filter	Stainless steel shell with adjustable height	RM 31,280
OTF-1200X-S	1" O.D. or 2" O.D.	Max: 20°C /min	Max: 1200°C (< 1 hour) Cont: 1100°C	Dial Vacuum Gauge	Split-able tube furnace with optional tube sizes	RM 16,500
OTF-1200X-S50-LVT	1" O.D. or 2" O.D.	Max: 10°C /min	Max: 1200°C (< 1 hour) Cont: 1100°C	Digital Vacuum Gauge, Temperature Calibrator, and Vacuum System	Can heat sample in vacuum up to 1E-2 Torr or flowing gas.	RM 32,580
OTF-1200X-S50-2F	2" O.D.	Max: 10°C /min	Max: 1200°C (< 1 hour) Cont: 1100°C	Digital Vacuum Gauge, Two Channel Gas Mixing Station, and Vacuum System	Anti corrosive gauge to be used with aggressive gases	RM 35,580
OTF-1200X	60 mm O.D. or 80 mm O.D. or 100 mm O.D.	Max: 20°C /min	Max: 1200°C (< 1 hour) Cont: 1100°C	Dial Vacuum Gauge	Split-able tube furnace with optional tube sizes	RM 16,950
OTF-1200X-4-RTP	4" O.D.	Max: 50°C /sec	Max: 1100°C (< 10 min) Cont: 600°C	Digital Vacuum Gauge	Rapid thermal processing system for fast heating and double layer steel case	RM 62,900
EQ-RTP-1000-LV3C	4" O.D.	Max: 50°C /sec	Max: 1100°C (< 10 min) Cont: 600°C	Three Channels Gas, Flowmeter, and Vacuum System	Rapid thermal processing system for fast heating, double layer steel case with mullite liner	RM 92,600

VACUUM CHAMBER

SVC-6050	MSK-VA25	EQ-SP-VC-2
Stainless Steel Vacuum Chamber for Sample Storage	Vacuum Chamber with Automatic Pressure Control	Auto Vacuum Dessicators with built in Pump
• 53 liter capacity with inside dimension of 16" L x 13" W x 14" H • Safely supports vacuum until -0.1 MPa • Double-wall stainless steel construction • KFD25 vacuum pump connection port • Electric strip built inside chamber to allow electrical device usage under vacuum • Inert gas can be filled inside chamber	• 25 liter capacity with inside dimension of 12" L x 12" W x 11" H •Vacuum pressure until 7.5 Torr using mechanical pump • Built in pressure sensor to cut off pump at 11.6 KPa • 6" touch screen PLC panel for automation • 226 l/m vacuum pump is built in	• 4 liter capacity with inside dimension of 13.8" L x 9.3 W x 5.9" H • Electronic pump automatically seals the container when close top cover • Sustainable vacuum level: 667 torr • Complete suction in only 2 minutes and maintain vacuum automatically • Vacuum seal indicator lights
RM 11,875	RM 29,700	RM 1,280

VACUUM OVEN

EQ-DZF-6020

EQ-DZF-6050

EQ-DZF-6020-HT500P-H220

General Features:

- The chamber is designed with stainless steel and welded with bracing pieces
- A good vacuum seal is achieved by silicone door gasket and positive latch door
- Vacuum port and gas inlet are installed to create a gas environment in the chamber
- PID temperature controller is installed

Model	Chamber Dimension L x W x H	Volume	Working Temperature	Features	Power	Price
EQ-DZF-6020	12" x 12" x 11"	25 L	Max: 250°C (< 4 hour) Cont: 200°C	28 Segments Temperature Controller	1000 W	RM 8,750
EQ-DZF-6050	16.3" x 13.5" x 14.5"	53 L	Max: 250°C (< 4 hour) Cont: 200 °C	28 Segments Temperature Controller	1500 W	RM 12,950
EQ-DZF-6020 -FP	12" x 12" x 11"	25 L	Max: 250°C (< 4 hour) Cont: 200 °C	28 Segments Temperature Controller, Flowmeter and Vacuum Pump System	1000 W	RM 20,728
EQ-DZF-6020 -HT500P-110J	12" x 12" x 11"	25 L	Max: 500°C	28 Segments Temperature Controller, Chiller and Vacuum Pump System	1800 W	RM 26,865
EQ-DZF-6020 -HT500P-110	12" x 12" x 11"	25 L	Max: 500°C	28 Segments Temperature Controller, Flowmeter, Chiller and Vacuum Pump System	1800 W	RM 31,735
EQ-DZF-6020 -HT500P-H220	12" x 12" x 11"	25 L	Max: 500°C	30 Segments Temperature Controller, Flowmeter, Chiller and Vacuum Pump System	2500 W	RM 41,480

CONVECTION OVEN

DHG-9023Q

DHG-9040

EQ-DHG-9015-220

EQ-DHG-9070V

EQ-DHG-9440V220

Convection oven from MTI is a CE Certified Mechanical Convection Oven with digital temperature controller. It can achieve dependable, uniform conditions by convecting heat to the sample evenly. Such convection oven can be widely used for drying, stoving, wax-melting and sterilization. It is ideal heating equipment for material R&D laboratories.

Model	Chamber Dimension L x W x H	Volume	Working Temperature	Features	Power	Price
DHG-9023Q	12" x 12" x 11"	25 L	Max: 250°C	28 segments temperature controller and 3" glass wool insulation to prevent heat loss from working chamber	500 W	RM 8,750
EQ-DHG-9070V	18" x 14" x 18"	71 L	Max: 300°C (< 8 hour) Cont: 250°C	28 segments temperature controller and overheat protection sensor automatically cuts power if over-heated	1500 W	RM 8,750
IEC26113-8 .3.4	18" x 14" x 18"	71 L	Max: 250 °C	Explosion proof glass window and frame, digital temperature controller with over-heated alarm and finishing alert (battery thermal abuse test)	1500 W	RM 13,980
EQ-DHG-9140V220	21.6" x 21.6" x 16"	122 L	Max: 300°C (< 8 hour) Cont: 250°C	28 segments temperature controller and overheat protection sensor automatically cuts power if over-heated	2300 W	RM 13,980
EQ-DHG-9440V220	28" x 26" x 35"	410 L	Max: 300°C (< 8 hour) Cont: 250°C	28 segments temperature controller and overheat protection sensor automatically cuts power if over-heated	3500 W	RM 24,780
EQ-DHG-9000JB	14" x 14" x 14"	43 L	Max: 400°C	28 segments temperature controller and overheat protection sensor automatically cuts power if over-heated	2200 W	RM 14,950
EQ-DHG-9000J	14" x 18" x 18"	71 L	Max: 400°C	28 segments temperature controller and overheat protection sensor automatically cuts power if over-heated	3200 W	RM 20,720
EQ-DHG-9015-220	10" x 10" x 8"	12 L	Max: 250°C	Single point digital precision temperature controller with one setting point and +/-1°C tolerance	750 W	RM 4,250
DHG-9040	14" x 14" x 14"	30 L	Max: 250°C	3" glass wool insulation to prevent heat loss from working chamber	1000 W	RM 7,710

FURNACE & GLOVE BOX ACCESSORIES

EQ-OFP-14

Oilless Vacuum Pump

- 120 liter/min
- Vacuum up to 80 - 100 Torr
- 450 W
- Noise level below 60 dB
- Completely oilles and maintenance free
- For small gas circulating system

RM 4,250

EQ-TW-3A

Single Step Rotary Vane Vacuum Pump

- 187 liter/min
- Vacuum up to 0.075 Torr
- 1/2 HP 360 W
- 20 ml volume of oil
- Oil Mist Reduction Unit with KF-25 Adapter and Quick Clamp are included

RM 4,250

EQ-2TW-4C

Double Step Rotary Vane Vacuum Pump

- 226 liter/min
- Vacuum up to 0.051 Torr
- 3/4 HP 550 W
- 1000 ml volume of oil
- Traps particles up to 0.3 microns
- Exhaust Filter, KF-D25 Adapter and Quick Clamp are included

RM 7,680

EQ-Adixen-ACP15

Pfeiffer's High Speed Oilless Dry Vacuum Pump

- 226 liter/min
- Vacuum up to 0.022 Torr
- 550 W (atm)
- KF25 Adaptor and 2 Quick Clamp are included
- Oil-free vacuum with no hydrocarbon vapor back streaming

RM 39,798

EQ-MFC-1

Precision Digital Mass Flow Controller

- Flow range up to 200 sccm
- +/- 2% full scale
- SS316 body material
- Pressure up to 1 MPa
- 1/4" tube fitting for inlet & outlet

RM 5,800

EQ-VPC-30D

Dual Valve Digital Vacuum & Pressure Gauge

- Range up to 800 Torr
- +/- 0.25% full-scale
- Measurement in: psia, psig, mm Hg, " Hg, " H20, mBar, Atm, Torr, kPa
- For clean, dry, noncorrosive and inert gas
- 1/8" NPT female connection

RM 11,620

EQ-VPC-30

In-Line Digital Vacuum Pressure Controller

- Range up to 800 Torr
- +/- 0.25% full-scale
- Measurement in Torr
- For clean, dry, noncorrosive and inert gas
- 1/8" NPT female connection

RM 8,750

EQ-OM-OS524E

Hanheld Infrared Thermometer with Laser Pointer

- Measurement range from 538°C - 2482°C
- Built-in Laser sighting in Circle & Dot configurations
- 100 ms response time
- Spectral response within 2 to 2.5 microns

RM 11,580

EQ-MTM-3

Three Channels Temperature Monitoring System

- Computerized via an RS232 comm port (cable included)
- Three buzzing alarms
- Accept K, S and B type of thermocouple
- Cut off power function when temperature exceeds the set point

RM 11,580

EQ-MTS02

Temperature Control System for MTI Furnace via Computer

- Can be used for MTI furnaces with 518P controller except GSL-1100X-S, KSL-1200-S and OTF-1200X-S.
- One control module, serial port controller cable and one disc of software package are included

RM 1,089

GPH-DHDO

PPM Grade Dual Column Inert Gas Purifier

- Built-in Regeneration Heater which can be heated up to 300°C
- It removes H2O, O2, CO, CO2, H2 and NMCH's to <0.1 ppm from any 99.9% purity inert gas.
- Max pressure up to 0.5 MPa
- Max flow rate up to 400 mL/min

RM 12,320

EQ-MTC-C4

WK518P Temperature Control Unit

- The controller uses PID via SCR power control with 30 segments programmable.
- Designed for lab furnaces heated by resistant wire, SiC and MoSi2 elements up to 1800°C at Max 4KW
- Accept J, K, T, E, N, B, R and S thermocouple input

RM 5,600

EQ-MTC-A5

Single Zone Precision Temperature Control Unit

- The controller uses PID via SCR power control with 30 segments programmable.
- Designed for precision control high temperature furnace from 1000°C - 1500°C with heating elements of resistant wire or SiC
- Accept K, S, R, J, B, C and D thermocouple input

RM 8,850

EQ-MTC-Z3

Three Zone Precision Temperature Contol System

- The controller uses PID via SCR power control with 30 segments programmable.
- Designed for precision control three zone tube furnace from 100°C - 1500°C with heating elements of resistant wire or SiC.
- Accept K, S, R, J, B, C and D thermocouple input

RM 29,403

EQ-CGM-2F

Two Channel Trace Gas Mixer

- Two Flowmeter with flow rate range from 16 to 160 mL/min
- Mechanical Pressure Gauge (mixing tank): 0 - 1.0 MPa, (0.02 MPa/grit)
- Three Pipe fittings for 1/4" pipe (nylon or stainless steel)
- No power required

RM 5,800

EQ-GSL-3F-SS

Gas Mixing Control Station

- Three Channel Flowmeter and Valves are provided
- To control up to 3 gases flowing through vacuum sealed MTI tube furnaces
- Mechanical Pressure Gauge (mixing tank): -0.1-0.15 MPa, (0.01 MPa/grit)

RM 18,780

EQ-W3000

Trace Oxygen Analyzer

- KF40 Connector is provided
- Three auto-ranging scales available: 0.01 ppm to 3000 ppm
- ZrO2 fuel-cell as the oxygen sensor
- Max pressure up to 90 psi
- Up-limit and low-limit alarm signal programmable

RM 16,800

EQ-RH-800

Precision Humidity Analyzer

- KF25 Flange is provided
- Measure humidity level up to 999.9 ppm
- Working pressure range is 0.1 Pa - 30 MPa
- Gas flow rate range is 1-5 lpm
- Alarm signal when higher than 20 mA or lower than 4 mA

RM 17,495

EQ-RH-606B

Humidity & Temperature Monitor

- Alarm can be set based on requirement
- Detachable Probe and KF25 feedthrough are provided
- Temperature range: 0°C-80°C
- Humidity range: 2%RH to 95%RH
- Accuracy: ±3%RH
- Sensor cable length: 3 meters

RM 1,580

EQ-GD-01

Laboratory Gas Drying Unit

- Max working pressure: 90 psig
- Max efficiency at 0.1 scfm
- 50 grams of water capacity
- Inlet and outlet connectors are SS 1/8" NPT female fittings wih molded polycarbonate column.
- Indicating dessicant turns blue when active and turns pink when exhausted

RM 1,369

POLISHING MACHINE

MTI manufactures and distributes all types grinding / polishing machines from 3" to 15" plate for research laboratories in material engineering, semiconductor failure analysis, precision optics and lapidary hobbyists. They can be used as a high precision lapping machine for polishing crystal components, semiconductor wafers and ceramic substrates. They also can be adopted as a standard grinding and polishing machine for preparing metallographic samples.

EQ-Unipol-800

EQ-Unipol-802

EQ-Unipol-810

EQ-Unipol-820

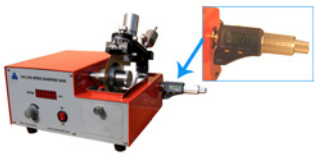
EQ-Unipol-1502

Model	EQ-Unipol-800	EQ-Unipol-802	EQ-Unipol-810	EQ-Unipol-820	EQ-Unipol-1210	EQ-Unipol-1502
Description	8" Economic Grinding / Polishing Machine with Complete Diamond Lapping Accessories	8" Precision Auto Lapping and Polishing Machine with Two 3" Work Stations	8" Multi Purpose Precision Polishing Machine with York Support	8" Heavy Duty Dual Platens Grinder/ Polisher with Magnetic Plates	12" Heavy Duty Precision Grinding / Polishing Machine with Two 4" Work Stations	15" Precision Automatic Lapping / Polishing Machine with Three 4" Work Stations
Variable Speed	500 - 3000 rpm	0 - 125 rpm	0 -600 rpm	0 - 600 rpm	50 - 600 rpm	0 - 80 rpm
Features	• Has coolant reservoir on the top and take off splash guard • Direct drive on 2" flange • 8" of diamond grinding plates accessories provided	• Can be controlled independently for polishing 2 pcs of 3" wafers in one running with digital display • Adjustable timer for auto-stop • 8" lapping plate accessories provided	• Belt driven platen with digital display. • 3" flat sample holder for polishing flat sample. • York supporter to allow polishing automatically. • 8" lapping plate accessories provided	• Belt driven platen with stable and quiet operation • Independent speed control with digital display for each plate • 8" lapping plate accessories provided	• Digital control panel and water resistance • 12" Aluminum mater plate with magnetic pad and steel buffer sheet provided for easy installation • 12" lapping plate accessories provided	• Can be controlled independently for polishing 3 pcs of 4" wafers or 9 pcs of 2" wafers in one running • Adjustable timer for auto-stop • 15" lapping plate accessories provided
Price	RM 6,056	RM 34,850	RM 22,350	RM 13,380	RM 11,275	RM 50,780

EQ-PF-2-1	
	2" Polishing Fixture for Precision/ Automatic Thinning and Polishing
Assembly 	• 2" sample holder to take wafer or substrate up to 2" • Thickness control screw fixture with resolution of 0.005 mm • Two micrometers are included with resolution of +/- 1 micron • Two dead weighs are included • Can fit with Unipol 801, Unipol 802 and any precision 8" polishing machine with York support to achieve automatic polishing or thinning.
	RM 1,392

EQ-PF-4-1V	
	4" Polishing Fixture with Vacuum Chuck for Faster Thinning and Polishing
Assembly 	• 4" sample holder vacuum chuck to take wafer or substrate up to 4" • Vacuum chuck can suck wafer through vacuum pump without wax • One digital micrometer is included with resolution of +/- 1 micron • Two dead weighs are included • Can fit with Unipol 1202 and Unipol 1502 and any precision 12" or larger polishing machine with York support to achieve automatic polishing or thinning.
	RM 8,850

CUTTING AND DICING SAWS

SYJ-30	SYJ-40	SYJ-150
		Digital Micrometer 
Heavy Duty High Speed Abrasive Cut-off Saw with 10" SiC Cutting Blades	High Speed Diamond Cut-off Saw with Vise and 4" Diamond Blades	Digital Low Speed Diamond Saw with 4" Precision Blades & Complete Accessories
• 10" SiC cutting blades are included • Max cutting section is up to 30 mm x 30 mm • Manually push up with T clamp vise is included for quick tightening or release • Motor speed is 2800 rpm • A cooling system is built in with inlet and outlet provided	• 4" impregnated diamond blades are included • Speed varies from 400 to 3250 rpm • Flat saw table for easy trimming oversized slabs • Max cutting depth is 25.4 mm • Vise provided to handle the sample smoothly	• Variable 0 - 600 rpm with LED digital display • Cutting width range is from 1mm - 24mm by adjusting the LCD digital micrometer • Max cutting depth is 55 mm when using 25 mm O.D blade flange • Two angle adjustable sample holder is included
RM 7,290	RM 3,800	RM 22,350

BATTERY TEST EQUIPMENT

BST8-3	EQ-M9711
8 Channel Battery Analyzer for All Rechargeable Cells	DC Programmable Electronic Load for Battery and Capacitor Discharging Test
• To analyze small coin cells and cylindrical batteries from 6.0 mA to 3000 mA, up to 5V • Eight independent programmable channels • The software (TC5.3) with calibration function is included to set various working modes for measuring capacity and life cycle for all types of rechargeable batteries	• Six high speed operation modes: CC, CR, CV, CW, CC+CV, CR+CW • Over current, over voltage, over power, over heat, polarity reversed protection • Supporting remote voltage compensation and multi-data storage • USB port with software interface to PC
RM 18,820	RM 5,850

LABORATORY MIXER

MSK-USP-3N		MSK-VUSP-12	
	Ultrasonic Processor for Dispersing, Homogenizing and Mixing Liquid Chemicals		Ultrasonic Processor with Vacuum Chamber and Pump
	• Ultrasonic power up to 300 W and 20 kHz frequency • Liquid handling from 100 ml - 2000 ml • Digital timer range from 1 sec - 99 hours • Temperature sensor is installed		• Ultrasonic power up to 1200 W and 20 kHz frequency • Liquid handling from 100 ml - 2000 ml • Digital timer range from 1 sec - 99 hours • Temperature control built in • Vacuum level less than 1 Torr
	RM 19,980		RM 54,960

LABORATORY PRESS

EQ-YLJ-24TA-H

EQ-YLJ-40T

MSK-160D

MSK-110D

CIP-15

Model	Max Pressure	Dimension L x W x H (mm)	Features	Price
EQ-YLJ-12T	12 Metric Tons	270 x 200 x 450	• Dial pressure gauge is built in with a protection cover • Built in hydraulic pump with auto return function and transparent protection shield	**RM 8,316**
EQ-YLJ-24T	12 Metric Tons	292 x 279 x 546	• Dial pressure gauge is built in with a protection cover • Built in hydraulic pump with auto return function and transparent protection shield	**RM 13,068**
EQ-YLJ-24-TA-H	24 Metric Tons	330 x 380 x 480	• Pressure gauge with built in pre-stable pressure switch and timer • Pressure load will stop when pressure reach pre-setting point	**RM 20,790**
EQ-YLJ-40TA	40 Metric Tons	370 x 350 x 450	• Pressure gauge with built in pre-stable pressure switch and timer • Pressure load will stop when pressure reach pre-setting point	**RM 23,760**
EQ-YLJ-40T	40 Metric Tons	160 x 330 x 470	• Built in hydraulic pump with auto reset function to return the stage to the original position	**RM 20,760**
MSK-110	8 Metric Tons	228 x 176.8 x 333	• Manual hydraulic pump with automatic pressure relief • Suitable for sealing various types of coin cells such as CR2032,CR2025,and CR2016 without changing the die	**RM 18,320**
MSK-160D	8 Metric Tons	240 x 125 x 410	• Certified electric crimper in assembling and disassembling dies for CR2032, CR2025, & CR2016 coin cells	**RM 29,700**
MSK-110D	8 Metric Tons	228 x 176.8 x 333	• Manual hydraulic pump with automatic return • Suitable for disassembling various types of coin cells, such as CR2032, CR2025, and CR2016, without destroying the internals of the cell in order to study the materials inside	**RM 20,985**
CIP-15	Chamber: 300 MPa Hydraulic: 15 T	260 x 210 x 500	• Smallest cold isostatic pressure of 22 mm I.D x 90 mm chamber size made with ultra strength alloy • Operation temperature within 10°C - 40°C • A plastic protection cover is included	**RM 36,640**
CIP-20TA	Chamber: 278 MPa Hydraulic: 20 T	440 x 430 x 560	• 30 mm I.D x 90 mm chamber size made with ultra strength alloy • Operation temperature within 10°C - 40°C • A plastic protection cover is included	**RM 53,460**
CIP-50A	Chamber: 250 MPa Hydraulic: 50 T	450 x 420 x 1010	• 50 mm I.D x 150 mm chamber size made with ultra strength alloy • Operation temperature within 10°C - 40°C • A plastic protection cover is included • Excellent tool for preparing high density ceramic rod, disk or target	**RM 111,890**

LABORATORY ROLLER

MSK-HRP-MR100A

4" Rolling Press with Dual Micrometer

- 100 mm Dia. x 100mm width Rollers made from hardened tool steel HRC60-62
- Dual micrometer for accurate thickness adjustment in the range 0 - 1.8 mm
- Constant Rolling Speed: 65 mm / second

RM 23,380

MSK-HRP-01

4" Hot Rolling Press

- Max heating temperature: 125°C
- 100 mm Dia. x 100mm width Rollers made from hardened tool steel HRC60-62
- Calendering thickness in the range 0 - 1.2 mm adjustable
- Rolling speed 0 - 40mm /sec adjustable

RM 52,870

SPIN COATER

VTC-50

Desktop Spin Coater with Complete Accessories

- 4" stainless steel spin plates are included, which can hold one or multiple samples by wax or double-sided tape
- The spinning speed is variable from 0-5100 rpm
- 20 ml syringe is included for liquid injection with adjustable syringe holder that can rotate freely along the support rod

RM 10,980

VTC-100A

Programmable Spin Coater with Vacuum Chucks, Oilless Vacuum Pump & Accessories

- Liquid disk made of polypropelene to resist most of corrosive solutions (1", 2", & 4")
- The spinning speed is variable from 500-8000 rpm with two programmable segments
- One oilless vacuum pump and one filter are included
- 20ml syringe is used to contain the coating material

RM 19,980

VTC-200

Programmable Vacuum Chuck Spin Coater with Complete Accessories

- One 6" vacuum chuck is included for holding 6" and 8" wafers
- 500 - 5000 rpm adjustable spinning speed
- Digital control panel with two programmable segments of different spin times and speeds
- 20ml syringe is used to contain the coating material

RM 21,225

DIP COATER

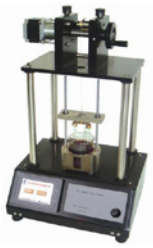
PTL-MM01

Desktop Dip Coater with Variable Speed

- Dipping speed is within 1-200 mm/mm adjustable
- Dipping traveling within 0-200 mm adjustable
- 150 ml solution container is included
- Sample weight less than 250g

RM 15,750

PTL-MM02

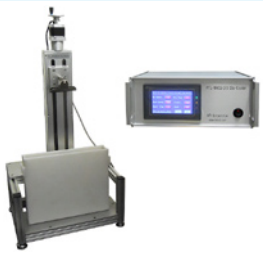


Programmable Dip Coater with Digital Controller

- Dipping speed is within 1-200 mm/min adjustable
- Dipping traveling within 0-75 mm adjustable
- 150 ml solution container is included
- Sample weight less than 250g

RM 24,085

PTL-200



PLC Controlled Dip Coater for Large Substrate

- Coating samples with size up to 10" x 12"
- Pulling rate, immersion rate, dwell time and cycling time are fully programmable
- 4 liter polypropylene tank is provided
- Max stroke length is up to 300 mm
- Max sample load is 7 kg

RM 30,530

LABORATORY MILL

MSK-SFM-1

MSK-SFM-2

MSK-SFM-12M

MSK-SFM-3

MSK-SFM-5

MSK-SFM-8

Model	Speed (rpm)	Dimension L x W x H (mm)	Features	Price
MSK-SFM-1	Main plate: 30 -350 Mixing tank: 0 - 300	450 x 490 x 530	• Granularity can be as small as 0.1 micron • Digital display speed in rpm • Timer controls major platen's running time from 1 - 999 min • Timer control tank rotation time from clockwise to anticlockwise direction from 1 - 99 min • 4 alumina jars with various size of YSZ mill balls are included	**RM 35,340**
MSK-SFM-2	Main plate: 0 -100 Mixing tank: 60 - 700	450 x 490 x 530	• Granularity can be as smaller than 0.5 micron • Three dimensions rotation: major platen, individual tank and up-down gravity • Digital display the speed of tank rotation in rpm • Running time can be set from 1 - 999 min • Four 1000 ml nylon jars, water-proof by rubber O-ring are included • Four sets of agate milling balls included (96 balls in total)	**RM 21,057**
MSK-SFM-3	1200	405 x 365 x 260	• Granularity can be as small as 0.1 micron • Timing range from 0 - 120 min • One 50 ml alumina jar with one set Zirconia mill balls are included	**RM 19,280**
MSK-SFM-5	0 - 1200	700 x 600 x 1100	• Granularity can be as small as 1 micron • 5 liter stainless steel container with water cooling jacket • Programmable controller to set time, speed and rotation direction	**RM 17,718**
MSK-SFM-7	320	330 x 300 x 530	• To produce coating slurry by mixing small batch of chemical and compound under vacuum to remove gas bubble and protect sample from oxidation • Built in vacuum pump with -0.08 - 0.09 MPa • Vibration plate frequency at 1 kHz • One 150 ml stainless steel and one 500 ml aluminum container are included	**RM 17,080**
MSK-SFM-8	Mortar: 0 -10 Pestle: 0 - 80	240 x 240 x 500	• Granularity can be as small as nanometers • 5" agate mortar and agate head pestle • Grinding pressure is adjusted by spring • Grinding time can be set according to using the automated controller	**RM 15,095**
MSK-SFM-12M	2700 - 4000	170 x 210 x 135	• 3 x 2.0ml tube can be loaded on the device simultaneously • Timer can be set within 3 sec to 3 min • Two types of Pure High Impact Zirconia Beads are included for rapid milling • The optimized mixing motion causes rapid milling through constant high velocity impact from the hardened micro-beads chosen	**RM 5,850**

MTI USA

VACUUM PEN

Model	EQ-SMT-72-ESD
Description	Anti-Static Electricity Vacuum Pen
Features	• A compact and portable pick-up tool, which can move chip, crystal wafer and components safely and easily • Vacuum suction is generated by pressing and releasing the trigger • Four suction cups in different sizes are included, which can meet various specific requirements • The pen body is made of ESD silicon Rubber to ensure operation safely and cleanly
Suction Cups Diameter	Four different sizes which are 6.4 mm, 9.5 mm, 12.5 mm and 19 mm made from conductive silicone material
Price	RM 150

ULTRASONIC CLEANER

Model	EQ-VGT-1613QTD	EQ-VGT-1620QTD
Inside Dimension	150 mm L x 140 mm W x 65 mm H	150 mm L x 140 mm W x 100 mm H
Volume	1300 ml	2000 ml
Ultrasonic Frequency	40 KHz	
Ultrasonic Power	60 W	
Features	• 1-99 minutes adjustable, to accurately calculate second. • Temperature setting: 20°C~80°C adjustable. • Digital display, time, temperature at a glance.	
Price	RM 1,380	RM 1,958

HANTECH KOREA

FURNACE

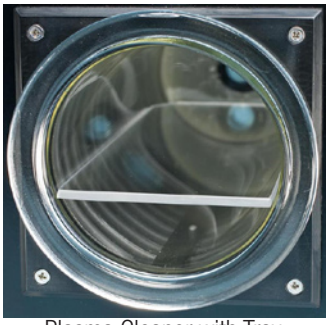
Box Furnace	Atmosphere Box Furnace	Atmosphere Box Furnace
C-14P	M-A15P	M-A1400
• Temp: Max 1000°C • Volume: 3 liter • Heater: Kanthal A1 Molding Heater (Heated on three sides) • Programmable PID controller • Dimension: 300 x 460 x 390 mm	• Temp: Max 1100°C • Volume: 4.5 liter • Programmable PID controller • Quartz tube: 50 (O.D)/46(I.D) x 300(L) mm • Dimension: 300 x 460 x 390 mm	• Temp: Max 1400°C • Volume: 1.5 liter • Programmable PID controller • Mullite tube: 53 (O.D)/45(I.D) x 300(L) mm • One side blocked type tube • Heater: SiC Heater (U type) • Gas mask, gas port, end mask • Dimension: 430 x 670 x 460 mm
RM 4,850	RM 9,850	RM 19,780

PLASMA CLEANER

PDC-002

PDC-32G-2

PDC-FMG-2



Plasma Cleaner with Tray

Chambers & Trays

HARRICK PLASMA Cleaner models are low-cost tabletop inductively coupled plasma devices that serve as excellent tools for surface cleaning, surface preparation and surface modification. Plasma treatment may be applied to a wide variety of materials, including metals, ceramics, composites, plastics, polymers and biomaterials. They are specifically designed for laboratory, R&D and office use. They offer inexpensive, compact functionality. Key applications areas include materials science, polymer science, biomedical materials, sterilization of dental and medical implants and instruments, optical cleaning and micro-fluidics.

Expanded Plasma Cleaner with PlasmaFlo	Basic Plasma Cleaner with PlasmaFlo	PlasmaFlo Gas Flow Mixer
PDC-002	**PDC-32G-2**	**PDC-FMG-2**
• 6” diameter x 6.5” length chamber • Hinged door with magnetic closure and viewing window • Fan cooling	• 3” diameter x 6.5” length chamber • Removable front cover for easy access	For fine control of process gas, process gas mixing, and monitoring of chamber pressure
RF Power settings: Low: 7.2 W Medium: 10.2 W High: 29.6 W	RF Power settings: Low: 6.8 W Medium: 10.5 W High: 18 W	Dual gas inputs for atmospheric air (0 psig) • Flowmeter 1: 49 mL/min maximum flowrate • Flowmeter 2: 104 mL/min maximum flowrate ±2% full scale accuracy
Input Power: 200 W	Input Power: 100 W	Thermocouple vacuum gauge and digital meter (1 to 1999 mTorr pressure range)
Tray size: 5.5” x 6.5” Dimensions: 11” H x 18” W x 9” D Weight: 45 lbs	Tray size: 2.75” x 6.5” Dimensions: 8.5” H x 10” W x 8” D Weight: 13 lbs	Dimensions: 8.5” H x 10” W x 8” D Weight: 7 lbs
RM 44,850	**RM 21,548**	**RM 15,780**

Harrick Plasma Cleaner: Design specifically for laboratory usage

Quartz Plasma Chamber	Quartz Sample Tray
• Replacement for standard Pyrex chamber • More stable material for long-term use • Beneficial for processes that require extremely clean processing conditions	Facilitates loading and unloading of small samples and batch processing • PDC-00T: 5.5” W x 6.5” L (for PDC-002) • PDC-32T: 2.75” W x 6.5” L (for PDC-32G-2)
PDC-00T: RM 10,490 **PDC-32T: RM 6,480**	**PDC-00T: RM 2,295** **PDC-32T: RM 1,150**

HARRICK PLASMA USA

VACUUM PUMP

Vacuump Pump for Harrick Plasma Cleaner					
Types	Standard Vacuum Pump		Standard Service Pump		
Features	• Uses standard hydrocarbon pump oil • Suitable for pumping nonreactive gas		• Suitable for concentrated oxygen and nonreactive gases • No hydrocarbon oil used		
Model	**PDC-VP-2**	**PDC-VPE-2**	**PDC-OPF-2**	**PDC-OPD-2**	**PDC-OPE-2**
Quality	Premium	Basic	Fomblin-Based Oxygen	Dry Oxygen	Economy Dry Oxygen
Pumping Speed	3.3/3.9 m3/hr	4.8/6 m3/hr	3.3/3.9 m3/hr	4.8/6 m3/hr	3.0/3.6 m3/hr
Ultimate Total Pressure (gas ballast closed)	1.5 mTorr	7.5 mTorr	1.5 mTorr	53/45 mTorr	250 mTorr
Ultimate Total Pressure (gas ballast open)	23 mTorr	150 mTorr	90 mTorr	263/225 mTorr	-
Motor Power	250/300 W	373 W	250/300 W	250/300 W	120 W
Price	**RM 15,780**	**RM 9,290**	**RM 20,880**	**RM 26,750**	**RM 19,508**

CORDOUAN TECH FRANCE

GRANULOMETER

CORDOUAN TECHNOLOGIES offers leading VASCO serial instrumentation for all types of particle size analysis and characterization from the nanometer up to few microns. Measurement of particle size distribution is routinely carried out across a wide range of industries and academics research. Nanoparticle size distribution is often a critical parameter in the manufacture of many products from the advanced research up to the end product.

Based on a patented innovative technology developed by the French Institute of Petroleum (IFP), the VASCO particle size analyzer is a unique instrument for micro to nano particle size measurements in dispersions. The measurement principle is based on Photon Correlation Spectroscopy (PCS) of the back scattered light.

Model	VASCO-1	VASCO-2	VASCO-3
Particle Size Range (nm)	10 to 6000	2 to 6000	1 to 6000
Sample Concentration Range	0.01% to 40%	0.001% to 40%	0.0003% to 40%
Photon Counting Unit	PM (Photomultiplier)	PM (Photomultiplier)	APD (Avalanche Photodiode)
Sample Setting Temperature	Fixed at 20°C	+15 to +70°C	+15 to +70°C
Laser Diode Characteristic	685 nm/15 mW	658 nm/75 mW	658 nm75 mW
Reproducibility/repeatability	Better than 5%		
Analysis Software	REAN performs multi-acquisitions, size distribution simulation, kinetic size of aggregation monitoring, features Cumulants, Contin and unique Padé-Laplace inversion algorithms		
Measurement Time	30 sec to 5 min depending on sample and measurement settings		
Sample Volume	min=50µL and max=5mL		
Operating Temperature	+15 to 30°C		
Warm Up Time	< 5 min		
Suspending Fluid	Aqueous and Organic Solvents		
Price	**RM 162,000**	**RM 210,000**	**RM 245,000**

IMR — USA

COMBUSTION GAS ANALYZER

The IMR1000 is a hand held pocket size stack gas analyzer for combustion tests on boilers, burners and etcetera.

General Features:

- Rugged plastic case with protective boot and magnet
- Fuel types to be analyzed are Natural Gas, Propane, Butane, LPG and Light Oil
- Parameters measured are Oxygen, Carbon Monoxide, Carbon Monoxide (ambient), Nitric Oxide and Flue-Gas Temperature
- Calculated values are Combustion Efficiency, Excess Air, Carbon Dioxide and CO corrected to 0% O_2
- Measuring units for the analyzer are ppm and mg/m^3
- The analyzer operating condition is within 0 - 40°C, 10 - 90% RH, non-condensing
- Thermocouple Type K as gas sampling probe with (0.25" diameter, 9" length with 9 ft hose length
- Battery operated (4 x AA)

Model	IMR1000-3	IMR1000-4
Gas Measurement	• O_2 : 0 -21% with resolution 0.1% / ±0.2% • CO : 0 - 4000 ppm with resolution 1 ppm/±10 ppm < 100 ppm • CO_2 : 0 -30% with resolution 1.0% • Efficiency: 0 - 99.9% with resolution 0.1% • Excess Air : 0 - 250% with resolution 0.1% • CO/CO2 : 0 - 0.999% with resolution 0.0001%	• O2 : 0 -21% with resolution 0.1% / ±0.2% • CO : 0 - 4000 ppm with resolution 1 ppm/±10 ppm < 100 ppm • CO2 : 0 -30% with resolution 1.0% • Efficiency: 0 - 99.9% with resolution 0.1% • Excess Air : 0 - 250% with resolution 0.1% • CO/CO2 : 0 - 0.999% with resolution 0.0001% • NO : 1 ppm/±2 ppm < 30 ppm with resolution ±5 ppm > 30 ppm
Price	RM 6,598	RM 10,650

Model	IMR2800 P	
General Features	• Measures/calculates up to 8 gases • 23 Fuels are programmed - 4 fuels are programmable • Automatic zero calibration with integrated self-check program • Unit selection : ppm - mg - mg(ref O_2) • Rechargeable battery with charger • Dimensions of 200 x 45 x 90 mm	
Gas Measurement	• O2, Oxygen 0-21% • CO, Carbon monoxide 0 - 2000 ppm • NO2, Nitrogen dioxide 0 - 200 ppm • SO2, Sulfur dioxide 0 - 4000 ppm • Draft - 40 to + 40 hPa • Losses 0- 99.9%	• CO2, Carbon dioxide 0-25% (calculation) • NO, Nitrogen oxide 0 - 1000 ppm • NOx, Nitrogen oxide 0 - 1200 ppm • HC, Hydro Carbon 0- 100% LEL • Lambda/excess air 0-999%
Price	RM 27,340	

IMR2800 P

HTA — ITALY

LIQUID AUTOSAMPLER

Model	HT300A
Features	• 110 positions rotating tray for 2 or 2.5 ml vials • Supports the use of 4 solvent vials of 10 ml each • Can be controlled by keypad or by PC using software • Hot and cold needle injections (Dual simultaneous injections) • Small volume, Priority, Ambient headspace and Multi phase Sampling available • Handle up to 100µL syringe volume • Injection speed up to 100µL/sec • Bubble elimination up to 15 pull up strokes
Price	RM 34,000

SINGLE GAS DETECTOR

GASTECH's new improved ToxiPro has three visual alarm windows for increased worker safety. Even better, each alarm window comes standard with both high visibility yellow and red alarm LEDs. In a warning condition, the yellow lights will flash and the lights in all three windows will chase. In a danger condition, the red LEDs will flash and the lights in all three windows will chase. lus, the improved ToxiPro has an audible alarm that is 10% louder than previous models! It has many alarm features, including an optional vibrating alarm and sound pattern and set points which are now fully user customizable.

General Features:

- Electrochemical toxic gas sensor or Galvanic oxygen sensor
- Loud two tone alarm rated at 100dB at 10 cm
- Stores latest 20 events, including sensor type, max reading, average reading, start time and stop time
- Continuous real-time gas readings, peak, STEL (if enabled), TWA (if enabled) and time of day readings
- Compact and rugged, clear polycarbonate with TPE overmold
- Automatic zero calibration with integrated self-check program

Toxic Gas- Single Gas Detector with Datalogging & Vibrating Alarm		
Model	**Description**	**Price**
54-45-01VD	ToxiPro - Carbon Monoxide (CO)	**RM 2,450**
54-45-02VD	ToxiPro - Hydrogen Sulphide (H_2S)	**RM 2,450**
54-45-03VD	ToxiPro - Sulphur Dioxide (SO_2 range 0-100ppm)	**RM 2,980**
54-45-09VD	ToxiPro - Nitrogen Dioxide (NO_2)	**RM 3,185**
54-45-10VD	ToxiPro - Hydrogen Cyanide (HCN)	**RM 3,185**
54-45-13VD	ToxiPro - Phosphine (PH_3)	**RM 3,185**
54-45-18VD	ToxiPro - Chlorine (CL_2 specific)	**RM 3,185**
54-45-19VD	ToxiPro - Carbon Monoxide (CO-H CO Minus)	**RM 2,920**
54-45-21VD	ToxiPro - Ammonia (NH_3)	**RM 2,980**
54-45-90VD	ToxiPro - Oxygen (O_2)	**RM 2,680**

MULTI GAS DETECTOR

Real-time readings of up to four gases simultaneously, one button operation and calibration, easy to read LCD display, audible and visual alarms, event logger, IrDA port, optional sample draw pump, rugged, compact and affordable - MultiPro Gas Detector. There are two optional battery packs for user to choose which are rechargable Li-Ion version includes charger or Alkaline (3 AA) battery packs.

General Features:

- Meets IPX5 water standard
- Front-mounted LCD displays readings up to 4 sensor channels
- Loud warbling, two-tone alarm rated at 92 dBA at one foot
- True one-button operation including automatic calibration
- Polycarbonate case with overmolded rubber boot
- Automatic zero calibration with integrated self-check program

Multi-Pro Muti Gas Detector with Datalogging & Vibrating Alarm		
Model	**Description**	**Price**
54-48-300ADY8	MultiPro Alkaline LEL/O2	**RM 3,580**
54-48-301ADY8	MultiPro Alkaline LEL / O2 / CO	**RM 5,275**
54-48-302ADY8	MultiPro, Alkaline LEL / O2 / H2S	**RM 5,275**
54-48-314ADY8	Multipro Alkaline LEL / O2 / CO / H2S (Duo-Tox)	**RM 5,275**
54-48-300NYD8	MultiPro Li-Ion LEL/O2	**RM 5,750**
54-48-301NYD8	MultiPro Li-Ion LEL / O2 / CO	**RM 5,750**
54-48-302NYD8	MultiPro Li-Ion LEL / O2 / H2S	**RM 5,750**
54-48-314NYD8	MultiPro Li-Ion LEL / O2 / CO / H2S (Duo-Tox)	**RM 5,750**
54-48-314NYDV8	MultiPro Li-Ion LEL / O2 / CO / H2S (Duo-Tox) : Value Pack	**RM 8,680**

BIOREACTOR - FERMENTOR

BE MARUBISHI's Photo Bioreactor was especially designed for cultivation of microalgae and callus. Fine bubbles from 30 micron stainless fiber filter creates high gas transfer coefficient. The low shear stress homogenization system makes vertical circulation flow minimalizing damage to cells. The highly effective lighting system stimulates photosynthesis.

Bioneer - 5L

MDFT-N-5L

Model	Bioneer - 5L	MDFT-N-5L
Description	Automatic Laboratory Bioreactor – Fermentor Series	Semi Automatic Fermentor- Biorector with Mono Mode controller
Vessel Type	Fermentor vessel made from Pyrex glass and SUS316L	
Volume	Total: 5 liter (autoclavable use) Working: Around 3.5 liter	
Speed Range	100 - 800 rpm	
Air Flow Rate	1 - 5 SL/min	
Built-in Controller Model	MDL-8C (Compact Multi-channel digital-indication/ controller) for temperature, pH, D.O., agitation speed	Semi automatic for temperature and agitation speed
Features	• Top driving, mechanical-seal type • RS-232C interface port	• Top driving, mechanical-seal type
Price	RM 121,000	RM 39,000

Multi Channel Indicator Controller for pH, Dissolved Oxygen & Anti Foam	
Model	MCI-6C
Features	• Measurement in ppm, mg/l or % saturation • Two 0/4….20mA current output, galvanically isolated • Password protection against accidental parameter change • Pressure and Salinity input for automatic correction • Pulse length or pulse frequency proportional control • Integrated PI controller, pulse length or pulse frequency • Two relay as limit contact with on/off delay timer • One relay as alarm contact and one relay as wash contact
Price	RM 32,750

JACKETED GLASS REACTOR

HEB's cylindrical glass reactor is an ideal device in synthetic chemical, biological, pharmaceutical and etcetera. Liquid circulation of hot, cold or cryogenic can be filled into the jacket of the reactor. Substance reacts by stirring under normal or negative pressure in airproof glass container. Reaction process can be watched clearly through crystal reaction flask. This equipment is very suitable in library experiment or medium-production in modern biology and pharmacy. It is also applied in synthesizing materials in fine chemical industry.

HEB-50L

HEB-30L

HEB-2L

HEB-100L

General Features:

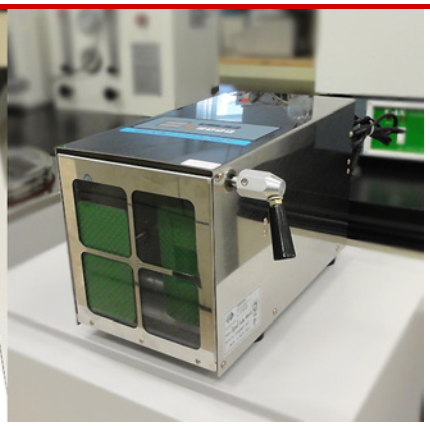
- Integrated jacket reaction flask has big caliber with good seal and high strength
- Professional PTFE cover supports high speed stirring in vacuum
- Three standard mouth can be used for multi-purpose according to customer needs. Standard fittings are charging cork, thermometer tube and reflux condenser.
- Converting-frequency adjustable speed for AC motor with constant rotating speed, no brushless, no sparkle, safe, stable and can continuously working for hours
- The glass is made from GG17 high quality silicone material which owns good chemical-physical attribute.
- Stainless steel frame which is fasten using three-joint hardware that will not shake when the user is running an experiment
- Basic standard components for each model installed by HEB to users are:
  - LCD controller with consists of a speed and temperature display, speed control knob and power switch
  - Actuator to stir substance which is an electric motor with a frequency converter and stirring rod
  - Temperature sensor and vacuum gauge installed to observe the substance condition
  - Condenser, receiving flask, constant pressure funnel, extract port, charging valve, discharging port, reflux, tray, kettle neck, reactor lid, up lid, gimbal joint collection and jacketed glass vessel are common parts in assembling jacketed glass reactor

Model	Overall Dimension L x W x H	Volume	Rotation Speed	Flask Necks	Torque	Power	Price
HEB-1L	35 x 27 x 65 cm	1 L	30 - 1300 rpm	4 pcs	2400 gcm	40 W	RM 4,360
HEB-2L	43 x 35 x 100 cm	2 L	100 - 1300 rpm	4 pcs	5000 gcm	90 W	RM 4,422
HEB-3L	50 x 38 x 95 cm	3 L	0 - 1300 rpm	4 pcs	5000 gcm	90 W	RM 5,280
HEB-5L	50 x 38 x 105 cm	5 L	30 - 1300 rpm	5 pcs	5000 gcm	120 W	RM 5,940
HEB-10L	57 x 57 x 180 cm	10 L	0 - 1300 rpm	5 pcs	7200 gcm	120 W	RM 9,980
HEB-20L	61 x 41 x 180 cm	20 L	50 - 900 rpm	5 pcs	15000 gcm	180 W	RM 12,580
HEB-30L	100 x 105 x 240 cm	30 L	50 - 900 rpm	5 pcs	15000 gcm	250 W	RM 14,450
HEB-50L	100 X 150 X 240 cm	50 L	50 - 900 rpm	5 pcs	22000 gcm	370 W	RM 15,980
HEB-80L	56 x 74 x 267 cm	80 L	0 - 500 rpm	5 or 6 pcs	22000 gcm	370 W	RM 23,760
HEB-100L	88 x 65 x 280 cm	100 L	50 - 900 rpm	5 or 6 pcs	22000 gcm	370 W	RM 28,580

BNF KOREA

KOREA

STOMACHER



BNF KOREA's Stomacher is the ideal choice for microbial extraction with easy steps of operation. This process has been found useful with a wide variety of samples, particularly: solid and semi-solid products, fresh and processed meat, dry fruits, cereals, grains, seeds, cheese, cosmetics, pharmaceutical products and specimen tissues. LED Embo Stomacher uses paddles to homogenize samples through a combination of crushing and stirring forces in extracting more organisms into suspension than any other blending process.

Model	LED Embo Stomacher
Description	Laboratory homogenizer that combines a number of international patents in homogenizing samples
Features	• Bench top size: 440 mm L x 280 mm W x 260 mm H • Sample capacity up to 400 ml • Paddle speed ranges from 50 - 200 rpm • Paddle distance is adjustable to handle various sample size • LCD control panel for monitoring operating condition, speed, time with alarm function • Door sensor function for safety operation with reinforced glass observation window • Embossing patterns of paddles for detailed crushing
Operating Condition	Operating Power : 220 VAC 60Hz Operating Temperature : 0°C - 40°C Storing Temperature : 0°C - 50°C Operating Humidity : 35 - 85%RH Power Consumption : 3.6 VA
Price	RM 9,360

HYSC

KOREA

COLONY COUNTER

After cultivating bacteria such as colon bacilli, it counts the number of bacteria. It is very useful lab equipment for physiological research, hospital clinical diagnosis.

Model	HYC-560
Description	Digital Colony Counter
Features	• 4 digits LED digital display with buzzer sounds for every counting • 2 counters mode by using button and a marking pen • Wider view using 125 mm wide lens. • Bacteria can be counted by picking with stainless needle point pen • 5" Magnifier, Power Cord, 100 mm Dish Holder, Stainless Needle Point Pen and Marking Pen Probe are included
Specification	Petri Dish Holder : Accepts 100 mm dish (removable) and 150 mm (fixed) Ilumination : Fluorescent lamp Dimensions: 310 mm L x 290 mm W x 100 mm H
Mode of Counting	• Manual push button counting • Needle-point probing • Marking pen probing
Price	RM 1,720

O_2 & CO_2 ANALYZERS

Model 901 | Model 902D | Model 902P | Model 905 | Model 906 | Model 907

Model 901	Model 902D	Model 902P
Headspace Oxygen Analyzer	Headspace Oxygen/Carbon Dioxide Analyzer	Oxygen/Carbon Dioxide Analyzer
Primarily used for the measurement of residual oxygen in gas-flushed food packages	Primarily used for testing modified atmosphere packages and other containers	Primarily used for research processes, gas blending, biotech and other system
• Measuring range from 0.0 to 100% O_2 • 0.1% O_2 resolution • Using proprietary electrochemical cell to sense O_2 • Internal pump that draws 5cc/sec with 2 - 12 sec adjustable timer • Battery operated (Four 'AA' NiMH rechargeable batteries) • Dimension of 200 x 100 x 40 mm • Included Consumables: 200 foam septas, 2 luer fit needles, 2 particulate filters, 2 liquid block filters • Can be used for food analysis such as meats, diary products, snack foods, baked foods, prepared meals, coffee, pet food and etcetera	• Miniature diaphragm pump with 5cc/sec flow and 2 - 12 sec adjustable timer • 12" length of double reinforced sample prob with exhaust port vents to air • Dimensions of 249 x 102 x 254 mm • Can be used for food analysis such as meats, diary products, snack foods, baked foods, prepared meals, coffee, pet food and etcetera Oxygen Channel • Proprietary electrochemical cell as sensor • O_2 ranges from 0 - 100% • 0.1% O_2 resolution Carbon Dioxide Channel • Solid-state Infrared cell as sensor • CO_2 ranges from 0 -20% or 0 - 100%	• Miniature diaphragm pump with 5cc/sec flow and 2 - 12 sec adjustable timer • Front panel fitting with luer connection for disposable filter and exhaust port vents to air or tube outlet for recirculation to close system • Dimensions of 249 x 102 x 254 mm • Can be used in bioreactor systems, gas blending systems, fruit storage areas, fermentation, biofuel experiments, algae offgas analysis and etcetera Oxygen Channel • Proprietary electrochemical cell as sensor • O_2 ranges from 0 - 100% • 0.1% O_2 resolution Carbon Dioxide Channel • Solid-state Infrared cell as sensor • CO_2 ranges from 0 -20% or 0 - 100%
RM 9,900	**RM 15,350**	**RM 14,380**

Model 905	Model 906	Model 907
Headspace Oxygen Analyzer	Carbon Dioxide Analyzer for Process & Research	Portable Oxygen/Carbon Dioxide Analyzer
Primarily used for the measurement of residual oxygen in gas-flushed food packages	Specifically designed for continuous or spot check measurement of CO_2 levels	Portable device that can be used for research applications or package testing
• Measuring range from 0.0 to 100% O_2 • 0.1% O_2 resolution • Proprietary electrochemical cell as sensor • Internal pump that draws 5cc/sec with 2 - 12 sec adjustable timer • Internal rechargeable 12 VDC battery • Internal rechargeable 12 VDC battery • Dimensions of 249 x 102 x 254 mm 200 foam septas, 2 luer fit needles, 2 particulate filters, 2 liquid block filters • Can be used for food analysis such as meats, diary products, snack foods, baked foods, prepared meals, coffee, pet food and etcetera	• CO_2 ranges from 0.0 to 100% (Other Ranges: 0 to 1%, 0 to 2.5%, 0 to 10%, 0 to 20%, 0-30%, 0-50%) • Infrared (NDIR) as sensor; non depleting wih no moving part • Internal rechargeable 12 VDC battery • Internal pump with on-off switch on front panel that draws about 5 cc/sec • Dimensions of 254 x 106 x 266.7 mm • Male connectors, filters, T style connector, inlet fitting, screwdriver, rubber washers, 60 cc syringe for sample injection and PTFE .456 micron are provided • Can be used in bioreactor systems, gas blending systems, fruit storage areas, fermentation, biofuel experiments, CO_2 mitigation reseach and etcetera	• Miniature diaphragm pump with 5cc/sec flow and 2 - 12 sec adjustable timer • 12" length of double reinforced sample prob with exhaust port vents to air • Dimensions of 203 x 51 x 178 mm • Can be used for food package applications and reseach & industrial applications Oxygen Channel • Proprietary electrochemical cell as sensor • O_2 ranges from 0 - 100% • 0.1% O_2 resolution Carbon Dioxide Channel • Solid-state Infrared cell as sensor • CO_2 ranges from 0 -20% or 0 - 100%
RM 11,980	**RM 11,980**	**RM 6,950**

SYRINGE PUMP

NE-300

DUAL-NE-1000X

NE-1000

NE-1002X

NE-1600

NE-4000

NE-9000

NEW ERA's programmable syringe pumps provide an affordable solution for the sophisticated dispensing and flow control applications. Features include infusion and withdrawal, computer interface and advanced programming option.

The programmable syringe pumps can be applied in Chemistry, Tissue Engineering, Nanotechnology, Electrospinning, Microfluids, Neuroscience, Biology and Physics.

Model	Description	Infusion Rates	Features	Price
NE-1000	Single Syringe Pump	0.73 µl/hr to 2100 ml/hr (1 cc syringe to 60 cc syringe)	• Holds 1 syringe from the smallest size available up to 60 cc • 35 lbs. at minimum speed, 18 lbs. at maximum speed	**RM 4,800**
DUAL-NE-1000X	Continuous Dual Syringe Pump System	0.73 µl/hr to 2100 ml/hr (1 cc syringe to 60 cc syringe)	• Holds 1 syringe up to 60 cc for each syringe pump • Allow continuous infusion or emulsification • 35 lbs. at minimum speed, 18 lbs. at maximum speed	**RM 8,980**
NE-1002X	Microfluid Syringe Pump	0.008 nl/hr to 2545 µl/min (0.5 ml syringe to 140 ml syringe)	• Holds 1 syringe up to 140 cc syringe but can only open up to about 120 cc lengthwise • Advance Per Step: 4.252232 Nanometers • 100 lbs. at minimum speed, 18 lbs. at maximum speed	**RM 8,320**
NE-1600	Six Channel Syringe Pumps	0.452µl/hr to 1451 ml/hr (1 cc syringe to 60 cc syringe)	• Holds 2, 4, or 6 syringes of up to 60 cc each • 160 lbs. at minimum speed, 30 lbs. at maximum speed	**RM 8,320**
NE-4000	Double Syringe Pump	1.459 µl/hr to 7635 ml/hr (1 cc syringe to 60 cc syringe)	• Hold 2 different syringes from the smallest size available up to 60 cc each of variable sizes • 100 lbs. at minimum speed, 18 lbs. at maximum speed	**RM 5,950**

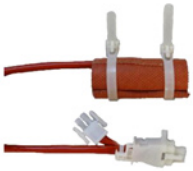
The NE-1000 Family of Syringe Pumps Features:

- Built for automation
- Infuses and withdraws
- Applications range from simple infusions to complex pumping programs
- Operates stand-alone or from a computer with programmable preset protocols
- Program up to 41 pumping phases: change pumping rates, set dispensing volumes, insert pauses, control and respond to external signals, sound the buzzer.
- RS-232 and TTL logic control interfaces

'Just Infusion' Syringe Pump	Peristaltic Dispensing Pump
NE-300	**NE-9000**
• Holds small or big syringes up to 60 ml • Infuses continuously until the user stop the pump • Variable infusion rate can be changed while pumping • Power failure mode allows pump to continue pumping after a reset • Maximum pumping rate of 1568 ml/hr with a 60 ml syringe • Does not withdraw, volume target or have computer interface	• Pump from a reservoir through replaceable continuous tubing • Continuous pumping up to 900 ml/min • Measured dispenses for production filling of bottles • Learn and Repeat™ for quick setup of production dispenses • Slow down mode to improve accuracy of dispenses • Programmable Phases allowing complex pumping applications and interaction with external devices
RM 2,230	**RM 3,580**

SYRINGE HEATER

HEATER-KIT-1LG



HEATER-PAD2-1LG

The syringe heater constantly monitors and displays the temperature measured on the primary heating pad. While regulating the temperature, the Heat Clamping will hold the set temperature. Thermo-Kinetic Mode reduces temperature swings and tightens the Heat Clamping at the set temperature by dynamically adjusting the heating by reacting to changes in the temperature measurement and rate of temperature change.

HEATER-KIT-1LG	HEATER-PAD2-1LG	HEATER-PAD3-1LG
Syringe Heater Kit Control Unit (Primary Heating Pad with Temperature Sensor)	Secondary Heating Pad	Third+ Heating Pad
• Maximum temperature of 185°C • User adjustable Thermo-Kinetic Heat Clamping for regulation of Set Point temperature • RS-232 bidirectional control from a computer with built-in RS-232 network driver • RS-232 network supports up to 100 heaters, pumps & other devices from one PC port • Power Failure Mode: Restarts the heater Active Mode after a power interruption • Selectable temperature units of Celsius or Fahrenheit • Soft power switching for long life • Non-volatile memory of all operating parameters		
RM 1,980	RM 680	RM 680

Syringe pump & syringe are not included with syringe heater.

SYRINGE PUMP SOFTWARE

SyringePumpPro is an easy to use computer interface for programmable syringe pumps. It permits faster programming and operation of one or more pumps. The user can configure and control multi-pump protocols, log pump activity and send commands to selected pumps.

Alternative license examples to purchase SyringePumpPro:

- Connecting 5 pumps to a single computer, at the same time, you will need one 5 pump license
- If you have 5 pumps connected one at a time, to one computer, a 1 pump license will do
- If you need to connect 5 single pumps to 5 separate computers, purchase five 1 pump licenses

Model	Description	Price
SYRINGE-PUMP-PRO-01	SyringePumpPro Software License for 1	RM 500
SYRINGE-PUMP-PRO-02	SyringePumpPro Software License for 2	RM 900
SYRINGE-PUMP-PRO-03	SyringePumpPro Software License for 3	RM 1,200
SYRINGE-PUMP-PRO-04	SyringePumpPro Software License for 4	RM 1,200
SYRINGE-PUMP-PRO-05	SyringePumpPro Software License for 5	RM 1,600

Flow rates vary with the selection of syringe and the type of motor and gearing in the pump. The following are example flow rates for a sample of syringes. Higher flow rates are available.

Syringe Size	Maximum Rate	Minimum Rate
0.5 µl	25.49 µl/hr	0.001 µl/hr
1 ml	53.09 ml/hr	0.73 µl/hr
5 ml	406.1 ml/hr	5.581 µl/hr
10 ml	600 ml/hr	8.244 µl/hr
20 ml	975.8 ml/hr	13.41 µl/hr
30 ml	1282 ml/hr	17.63 µl/hr
60 ml	2120 ml/hr	29.13 µl/hr

LAB SHAKERS

E5850

E6010

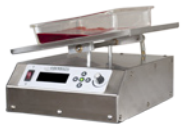
E6000

E6360

EBERBACH Reciprocating Lab Shakers are known for their durability, ease of use and ability to mix solutions well. Eberbach reciprocating Lab Shakers are built for continuous duty with multiple options available.

Model	Description	Features	Price
E5850	Benchtop Reciprocal Shaker	• Powered by a 1/17 hp Bodine DC motor which drives the platform through a filtered SCR controller • The speed is continuously variable between a range of 20 - 240 osc/min • Shake a load of 40 lbs at low speed and 20 lbs at maximum	RM 12,278
E6000	Mid Range Reciprocal Shaker	• Powered by a 1/6 hp GE split phase motor • Speed control is continuously variable between a range of 60-260 osc/minute • Max load carrying capacity of 50 lbs	RM 13,820
E6010	Fixed Speed Reciprocal Shaker	• Powered by a 1/6 hp GE split phase motor • A two-speed unit, operating at either 180 or 280 osc/minute (+/- 5 osc/min) and controlled by a three position switch • Max load carrying capacity of 40 lbs	RM 12,120
E6360	Hot Plate Shaker	• Powered by a 1/17 hp Bodine DC motor which drives the platform through a filtered SCR controller • The speed is continuously variable between a range of 20 - 240 osc/minutes • The heater is controlled by a three position switch on the front of the shaker, delivering 360 W at LOW position, 720 W at MEDIUM and 1440 W at HIGH • Max load carrying capacity of 40 lbs • Incorporates a 10”x16” aluminum hotplate within the box carrier	RM 22,920

E6700



Platform Rocker

• For preparations requiring agitation with minimal shear forces
• The 12”x12” platform has a nonskid surface and rocks 15 degrees each side of horizontal
• The speed is adjustable between 5-50 cycles/min
• 60 min front panel timer provided
• Handle loads up to 10 lbs

RM 6,380

EL680

Wrist Action Shaker

• For extracting, dissolving and emulsifying samples
• Mimics human wrist action: from very slow, gentle mixing to violent agitation
• This variable speed unit runs from 100-960 oscillations per minute
• Handle loads up to 9 lbs

RM 13,650

BLENDERS

E8000

Waring Blender 4 Liter

• Heavyduty 3 HP motor with three running speeds of 16K, 18K, 20K rpm and Pulse
• 4L working capacity stainless steel container and stainless steel blending assembly with high performance ball bearings

RM 11,286

E8070

Waring Blender 2 Liter

• Heavy duty 1 HP motor that runs at 2 run speeds: 19000 & 23000 rpm
• 2L working capacity stainless steel container and 2 piece vinyl lid

RM 4,980

EBERBACH USA

ELECTRO ANALYZER

EBERBACH's Electro-Analyzer E1000 apparatus is the laboratory standard for determinations of lead, nickel, copper, zinc, antimony, cadmium and other metals by the electro-deposition process. The front panel protects the apparatus from corrosive spillage and fumes. No electrically corrodible components are positioned where material may fall into the cell and alter results.

Model	E1000
DC Output Characteristics	• Two position DC output • 0-10V, 0-10A at each position • Polarity reversible
Integral Stirrer	• 620 rpm fixed • Adaptable for use with rotating anode
Size & Weight	Height: 29.5 in (75cm), Width: 15.25 in (38.7 cm); Depth: 16.5 in (42cm), Weight: 78 lbs (35.5 kgs)
Accessories	• Heater, thermostatically controlled • Adaptable for use with rotating anode • Agitator
Platinum Electrodes	Stationary Type • Anode: Cylinder Diameter: 1"; Cylinder Height: 2 1/4"; Overall Height: 5 1/2" Mesh: 45; Weight: 25 gm • Cathode: Cylinder Diameter: 2"; Cylinder Height: 2 1/4"; Overall Height: 5 1/2" Mesh: 45; Weight: 39.5 gm Rotating Type • Anode: Cylinder Diameter: 1/2"; Cylinder Height: 2"; Overall Height: 5"; Mesh: 45; Weight: 14 gm
Price	RM 45,780

VACUUMER KOREA

VACUUM PUMP

VOP-60

VOP-100

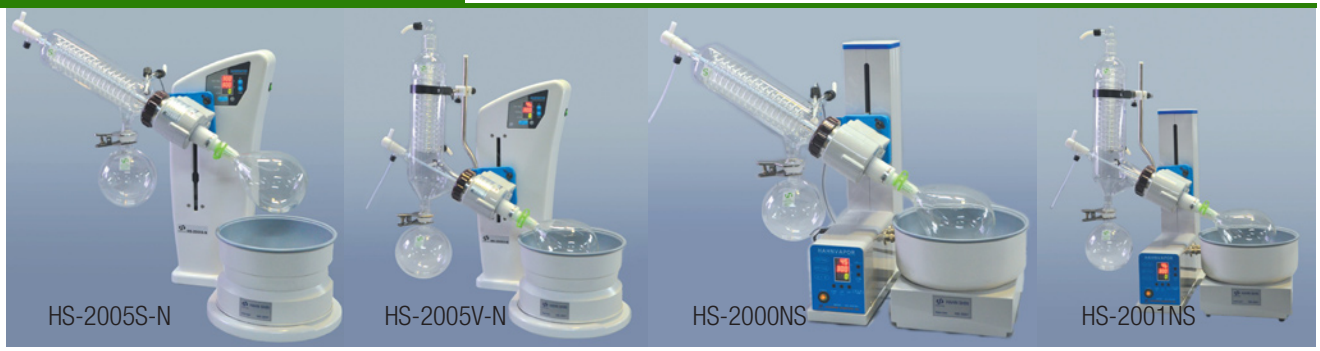
VOP-150

VOP-200

Model	VOP-60	VOP-100	VOP-150	VOP-200
Ultimate Pressure (Pa)	$6.7x10^{-2}$ ($6.7x10^{-1}$)			
Pumping Speed	50/60 l/m	100/120 l/m	150/180 l/m	200/240 l/m
Motor Power	200 W	400 W	550 W	550 W
Motor Speed	1430/1730 rpm			
Recommended Oil	COSMA-100			
Oil Capacity	800	900	1000	1100
Suction Pipe (o.d x i.d)	KF25			
Temperature Range	7-40°C			
Weight	17 kg	25 kg	28.5 kg	30 kg
Dimension (wxdxh mm)	165x411x234	171x464x238	189x504x253	189x524x253
Price	RM 5,940	RM 6,534	RM 8,019	RM 8,613

VACUUMER's Precision Vacuum Pumps are fine high-end vacuum pumps with gas ballast valve and oil back flow prevention mechanism installed. They are also installed with over current protection and filter to prevent sludge contamination. Vacuumer's Precision Vacuum Pump are suitable in physical and chemical apparatus industries.

ROTARY EVAPORATOR



Model	HS-2005S-N	HS-2005V-N	HS-2000NS	HS-2001NS
Dimension (lxwxh mm)	730 x 410 x 630	620 x 410 x 870	320 x 730 x 520	320 x 580 x 720
Weight	19.5 kg	19.5 kg	16 kg	17 kg
Condenser	Slant type condenser	Vertical type condenser	Slant type condenser	Vertical type condenser
Speed	20 - 280 rpm			
Flask Capacity	6 different types of flasks are attachable (from 50 ml to 3000 ml)			
Heater Power	1000 W			
Bath Capacity	4.3 liter			
Temperature	Ambient - 180°C			
Features	• Digital control panel for temperature and speed • If the amount of water goes down under the certain threshold in the heating bath, the system automatically turns off its power for the safety purpose • Included Water Bath HS-3001 with PTFE coating and double jacketed body			
Price	RM 8,250	RM 8,580	RM 7,260	RM 7,920

WATER BATH

HS-3003

Cold Trap Bath

- Consists up to 4 liter
- Dimension : 250 x 510 x 510 mm
- Glass type
- Temperature down to -40°C
- Refrigerator power: 1/3 HP
- Refrigerant: 134 A
- Using FND Controller
- Power consumption up to 334 W
- Applied when the cold trap needs to be done in extremely low temperature
- Quick freezing sample for freeze-drying and reaction stop of the enzyme

RM 5,874

HS-3005N

Cooling Water Circulator Bath

- Consists up to 4 liter
- Dimension: 250 x 510 x 510 mm
- Refrigerant: 134 A
- Using FND Controller
- Flow rate up to 15 liter/min
- Temperature down to -20°C
- Using FND Controller
- Power consumption up to 334 W
- Refrigerator power: 1/3 HP
- Refrigerant: 134 A
- Using FND Controller
- As a source of cooling to the the rotary evaporator

RM 5,220

ASPIRATOR

Model	HS-3000
Description	Electric Aspirator
Features	• Bath is made of polypropylene • Pump capacity: 18 liter/min x 2EA and bath capacity: 8 liter • Motor Power 150 W • Dimension: 320 x 240 x 330 mm
Price	RM 2,150

WATER BATH

SH-GWB6D	SH-GWB11D	SH-GWB22D

General Water Bath		
• Capacity up to 6 liter • Temperature ranges up to 99°C • Timer: 0 - 99 hour 59 min • Heating power up to 600 W • Using Digital PID Controller • Made from Stainless Steel SUS304 • External Dimension: 340 x 195 x 286 mm • Internal Dimension: 300 x 155 x 170 mm	• Capacity up to 11 liter • Temperature ranges up to 99°C • Timer: 0 - 99 hour 59 min • Heating power up to 1000 W • Using Digital PID Controller • Made from Stainless Steel SUS304 • External Dimension: 340 x 280 x 286 mm • Internal Dimension: 300 x 240 x 170 mm	• Capacity up to 22 liter • Temperature ranges up to 99°C • Timer: 0 - 99 hour 59 min • Heating power up to 2000 W • Using Digital PID Controller • Made from Stainless Steel SUS304 • External Dimension: 534 x 330 x 292 mm • External Dimension: 500 x 295 x 170 mm
RM 1,780	**RM 2,049**	**RM 3,247**

SH-GWB6-3	SH-GWB11-3	SH-GWB22-3

Three Holes Water Bath		
• Capacity up to 6 liter x 3 ports • Temperature ranges: Low (5°C to 50°C) Med (40°C to 70°C) High (60°C to 99°C) • Timer: 0 - 99 hour 59 min • Heating power up to 1400 W • Using Digital PID Controller • Made from Stainless Steel SUS304 • Drain valve is installed • External dimension: 690 x 470 x 360 mm • Internal dimension: (155 x 300 x 150 mm) x 3 ports	• Capacity up to 11 liter x 3 ports • Temperature ranges: Low (5°C to 50°C) Med (40°C to 70°C) High (60°C to 99°C) • Timer: 0 - 99 hour 59 min • Heating power up to 2300 W • Using Digital PID Controller • Made from Stainless Steel SUS304 • Drain valve is installed • External dimension: 960 x 470 x 360 mm • Internal dimension: (240 x 300 x 150 mm) x 3 ports	• Capacity up to 22 liter x 3 ports • Temperature ranges: Low (5°C to 50°C) Med (40°C to 70°C) High (60°C to 99°C) • Timer: 0 - 99 hour 59 min • Heating power up to 4500 W • Using Digital PID Controller • Made from Stainless Steel SUS304 • Drain valve is installed • External dimension: 1050 x 670 x 360 mm • Internal dimension: (259 x 500 x 150 mm) x 3 ports
RM 6,662	**RM 8,485**	**RM 10,305**

WATER BATH

CWB-13M	CWB-20M	CWB-30M
Cooling Bath		
Internal Dimension: 340 x 210 x 180 mm	Internal Dimension: 4000 x 250 x 200 mm	Internal Dimension: 450x 300 x 230 mm
Heating Power: 1500 W	Heating Power: 2000 W	Heating Power: 3000 W
• Capacity up to 6 liter • Temperature ranges from -10°C to 99°C • Using Digital PID Controller with LED digital display • Magnetic drive circulator pump with maximum flow rate 30 liter/min • Refrigerator power: 1/2 HP • Over temperature cut-off safety • Internal material made from Stainless Steel SUS304		
RM 8,824	RM 9,668	RM 15,780

SHAKER

SI-100A	SI-100R	SI-300R	SI-300RF	SI-64	SI-150
Shaking Incubator					
• Temperature: 5°C to 60°C • No refrigerator power	• Temperature: 0°C to 60°C • Refrigerator power: 1/4 HP	• No light system	• Fluorescent light system consists of 20 W	• Internal dimension: 400 x 400 x 400 mm • External dimension: 470 x 580 x 400 mm	• Internal dimension: 400 x 400 x 400 mm • External dimension: 630 x 740 x 750 mm
• Internal dimension: 530 x 560 x 380 mm • External dimension: 590 x 850 x 825 mm • Krypton light system consists of 60 W		• Internal dimension: 890 x 640 x 400 mm • External dimension: 1120 x 720 x 890 mm • Refrigerator power: 1/3 HP • Temperature: 0°C to 60°C		• Door Safety • Temperature: 5°C to 60°C	
• Speed range from 20 - 300 rpm with shaking stroke of 20 mm orbital motion • Internal material made from Stainless Steel SUS304 • Over temperature cut-off • Using PID digital controller					
RM 8,220	RM 9,680	RM 13,950	RM 14,980	RM 7,080	RM 7,920

HYSC KOREA

Shaking Water Bath			
Model	SWB-25	SWB-35	SWB-55
Features	• Using Digital PID Controller with LED digital display • Over temperature cut-off safety • heating power up to 2300 W • Temperature ranges from ambient 5°C to 100°C • Internal material made from Stainless Steel SUS304 • Unique design multi rack separable • Internal dimension: 500 x 300 x 240 mm • External dimension: 730 x 360 x 400 mm		
Price	RM 5,850	RM 6,580	RM 7,690

MTI USA

ALUMINA CRUCIBLES

High purity alumina products can withstand very high temperature under reducing, inert or high vacuum condition. They remain good chemical resistance under high temperatures, and have excellent wear and abrasion resistance. Alumina products can withstand up to 1750°C.

Alumina Crucible Low Form

Alumina Crucible Low Form 99.6%					
Model	Top diameter (mm)	Bottom diameter (mm)	Height (mm)	Capacity (ml)	Price
AL-1020	35	24	42	20	RM 31.00
AL-1050	48	30	54	50	RM 49.50
AL-1100	58	35	68	100	RM 66.00
AL-1150	66	40	80	150	RM 89.00
AL-1250	79	42	93	250	RM 108.00
AL-1500	100	60	110	500	RM 178.00

Alumina Crucible Lid

Alumina Crucible Low Form Lid			
Model	Top diameter (mm)	Capacity (ml)	Price
AL-1020-LID	35	20	RM 30.00
AL-1050-LID	48	50	RM 30.00
AL-1100-LID	58	100	RM 49.00
AL-1150-LID	66	150	RM 55.00

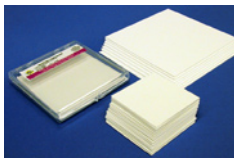
Alumina Crucible Low Form

Alumina Crucible High Form				
Model	Top diameter (mm)	Height (mm)	Capacity (ml)	Price
AL-2010A	25	25	10	RM 33.00
AL-2050A	45	35	50	RM 49.50
AL-2050B	40	45	50	RM 49.50
AL-2100	40	95	100	RM 66.00
AL-2250	60	100	250	RM 108.90
AL-2500	72	148	500	RM 174.90

ALUMINA CRUCIBLES

Alumina Boat Rectangular

Alumina Boat Rectangular 99.8%				
Model	Length (mm)	Width (mm)	Height (mm)	Price
EQL54W38H20	54	38	20	RM 43.00
EQL82W42H23	82	42	23	RM 68.00
EQL50W40H20	50	40	20	RM 45.00
EQL50W20H20	50	20	20	RM 45.00
EQL82-W42H23	82	42	23	RM 43.00
EQL65W88H28	65	88	28	RM 89.00
EQL65W65H30	65	65	30	RM 89.00
EQL100W40H18	100	40	18	RM 68.00
EQL100W20H20	100	20	20	RM 68.00
EQL90W65H30	90	65	30	RM 89.00
EQL150W50H30	150	50	30	RM 275.00
EQL300W40H20	300	40	20	RM 395.00



Alumina Plates

Alumina Plate Rectangular 99.8%				
Model	Length (mm)	Width (mm)	Thickness (mm)	Price
AL-P220-220-6	220	220	6	RM 624.00
AL-P150-80-6	150	80	6	RM 226.00
AL-P102-25-6	102	25	6	RM 119.00
AL-P90-65-6	90	65	6	RM 119.00

GRAPHITE CRUCIBLE

Graphite crucible can withstand the high temperature, and has good resistance to chemical erosions and thermal shock. Especially graphite crucible is ideal for the melting of aluminum, copper and other metals.

EQ-G40

EQ-GR009G

Graphite Crucible		
Model	EQ-G40	EQ-GR009G
O.D.	1.5”	Top: 2.285” Bottom: 1.81”
I.D.	1.25”	1.415”
Depth	3.75”	3.06”
Height	3.96”	3.435”
Temperature	399°C to 2760°C	
Compressive Strength	42.7 MPa	
Price	RM 172.00	RM 147.50

QUARTZ BOAT

Quartz boat is made from high purity quartz (4N purity) with 1200°C working temperature.

Model	Dimension	Features	Price
EQ-QB-0210	20 x 10 x 8 mm	Can fit in MTI GSL-1100X and OTF-1200X-S (1" O.D tube furnace)	RM 125
EQ-QB-1017	100 x 17 x 10 mm	Can fit in MTI GSL-1100X and OTF-1200X-S (1" O.D tube furnace)	RM 190
EQ-QB-1042	100 x 42 x 20 mm	Can fit in MTI 50 - 80 mm O.D tube furnace	RM 255
EQ-QB-1062	100 x 60 x 26 mm	Can fit in MTI OTF1200-80 tube furnace (3" - 80 mm O.D tube furnace)	RM 320
EQ-QB-3062	300 x 60 x 28 mm	Can fit in MTI OTF1200-80 tube furnace (3" - 80 mm O.D tube furnace)	RM 530
EQ-QB-4284	420 x 80 x 40 mm	Can fit in MTI OTF1200-100 tube furnace (1000 O.D tube furnace)	RM 705
EQ-QF-0806	218 x 162 x 50 mm	• Constructs a flat surface inside the processing tube where can put sample on • Can be fit in MTI VBF-1200X-H8 Bench Top Vacuum Chamber Furnace	RM 5,820
EQ-QB-1025	Diffusion of 1" wafer processing	• Design for diffusion, oxidation and annealing 1" Si wafer • Can fit in MTI OTF-1200X-S50 tube furnace (2" tube furnace)	RM 1,360
EQ-QB-8025	Diffusion of 8" wafer processing	• Can fit in MTI GSL1100X8 tube furnace • Can carry 25 piece wafers of 8" diameter in each boat	RM 2,950
EQ-QB-2025	Diffusion of 2" wafer processing	• Can carry 25 piece wafers of 2" diameter x 0.5 mm thickness in each boat • Can fit in MTI OTF1200-3 tube furnace (3" tube furnace)	RM 1,520
EQ-QB-3025	Diffusion of 3" wafer processing	• Can carry 25 piece wafers of 3" diameter x 0.5 mm thickness in each boat • Can fit in MTI OTF1200-4 tube furnace	RM 1,520
EQ-QB-4025	Diffusion of 4" wafer processing	• Can carry 25 piece wafers of 4" diameter x 0.5 mm thickness in each boat • Can fit in MTI OTF1200X6 tube furnace	RM 1,750
EQ-QB-6025	Diffusion of 6" wafer processing	• Can carry 25 piece wafers of 6" diameter in each boat • Can fit in MTI GSL1100X8 tube furnace and Compact Vacuum Chamber Furnace EQ-VBF-1200X	RM 2,350
EQ-QB-4025S	Diffusion of 4"X 4" wafer processing	• Can carry 25 piece wafers of 4" x 4" square x 0.5 mm thickness in each boat • Can fit in MTI OTF-1200X-5L, VBF-1200X-H8, and OTF-1100X-8.5 tube furnace	RM 2,950

MORTAR & PESTLE

Agate Mortar & Pestle				
Model	Outside diameter (mm)	Inside diameter (mm)	Size (inch)	Price
MTA-2	50	40	2	RM 126
MTA-3	75	60	3	RM 245
MTA-4	100	80	4	RM 585
MTA-5	125	110	5	RM 780
MTA-6	150	130	6	RM 1,080
MTA-7	175	160	7	RM 1,680
MTA-8	200	190	8	RM 2,780

OTHER EQUIPMENTS

SLI-DLC 80-2B

Desktop Low Speed Centrifuge

- Speed up to 4000 rpm
- Capacity: 12 x 20 ml
- Timer: 0 to 30 minutes
- Dimension: 35 x 34 x 36 cm

RM 980

SLI-HSCT-H

Desktop High Speed Centrifuge

- Speed up to 12000 rpm
- Digital control panel
- Timer: 99 hour 59 min
- Dimension: 50 x 44 x 33 cm

6x50 ml: **RM 5,350**

12 x 1.5 ml: **RM 3,480**

SLI-EB-10001T

Electronic Balance

- Weight range: 0 - 1000 g
- Accuracy: 100 mg
- Pan size: 130 mm dia.
- Dimension: 21 x 16 x 5 cm

RM 300

SLI-PHM-004

pH Meter

- pH range: 0.00 - 14.00
- Accuracy: +/- 0.05 pH
- Temperature: 5 - 60°C
- Resolution: 0.01 pH

RM 980

SLI-HUC-1200H

Desktop Ultrasonic Cleaner

- Consists of 2 liter
- Ultrasonic Power: 50 W
- Frequency: 53 kHz
- Dimension:15 x 14 x 10 cm
- Timer: 1-99 min

RM 1,100

SLI-BDO-35D

Digital Laboratory Drying Oven

- Power: 1200 W
- Temperature up to 250°C
- Dimension: 35 x 35 x 35 cm

RM 1,970

SLI-OOI-10A

Dual Purpose Oven/Incubator

- Power: 850 W
- Temperature up to 250°C
- Dimension: 25 x 26 x 25 cm

RM 3,200

SLI-DO-9055A

Force Air Convection Drying Oven

- Consists of 50 liter
- Power: 600 W
- Temperature up to 300°C
- Dimension: 42 x 39.5 x 35 cm

RM 3,700

SLI-APG-100

High Speed All Purpose Grinder

- Speed up to 26000 rpm
- Mesh size: 40-200
- Weight: 3.5 kg

RM 850

SLI-SG-160

Laboratory Grinder

- Speed up to 5000 rpm
- Mesh Size: 40-120
- Weight: 58 kg

RM 2,950

SLI-BLSJ-A4

Water Bath with Magnetic Stir

- Speed up to 1200 rpm
- Temperature up to 100°C
- Time range: 0 - 120 min

RM 2,950

SLI-IT-852B / SLI-IT-350

Infrared Thermometer

SLI-IT-852B
- Temperature ranges from -18°C to 650°C

RM 350

SLI-IT-350
- Temperature ranges from -50°C to 350°C

RM 300

SLI-SAM-30C

Soil Moisture Meter

- Depth range: 2 - 30 cm

RM 650

SLI-IA-814

Timber Moisture Meter

- Moisture range: 5% - 40%
- Accuracy: +/- 1%

RM 120

SLI-IA-6G

Paper Moisture Meter

- Moisture range: 0% - 40%
- Accuracy: +/- 1%

RM 150

SLI-SR-110ATC / SLI-ECM-811ATC / SLI-S-212ATC

SLI-SR-110ATC — Saccharometer
- Range: 0 - 5%
- Min value: 0.10%

RM 350

SLI-ECM-811ATC — Emulsion Concentrator Meter
- Range: 0 - 15%
- Min value: 0.5%, 0 - 15%,0.5%

RM 285

SLI-S-212ATC — Saltmeter
- Range: 0 - 28%
- Min value: 0.20%

RM 285

LABORATORY EQUIPMENT

CUSTOMIZED SYSTEM

In order to support our customer towards sophisticated research especially in the area of Nanomaterial, Semiconductor, MEMS, PV, LED, Surface Acoustic Wave Technology, Thin Film Coating, and Ultra High Vacuum Technology; we are currently forming business alliance with LJUHV in providing the technology know how and equipment for the above endeavor. Aside from the precision equipment, we are supplying a complete line of pure material, compound, and substrate in various purity for completion of our equipments.

The customized systems are inclusive of: Pulse Laser Deposition Coating, Ultra High Vacuum Magnetron Sputtering, Continuous Vacuum Magnetron Sputtering, Ion Sputtering, Electron Beam Evaporation, Thermal Evaporation with Plasma Assisted Vapor Deposition Equipment and Induction Coupled Plasma.

Chamber

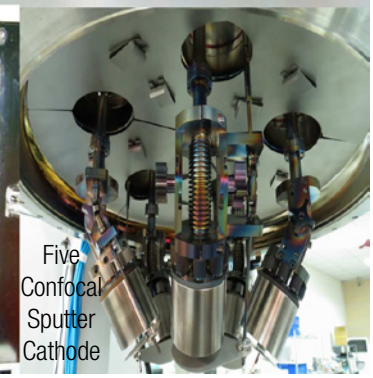
Pulse Laser Deposition System

Sputter Cathode

Single Target PLD

Target Manipulator

Confocal Sputter


Five Confocal Sputter Cathode

LJUHV CUSTOMIZED SYSTEM is complete with Human-Machine Interface (HMI) controller for user convenience in handling their system.

Confocal Sputter System

Plasma Enhanced Chemical Vapor Deposition System

Pulse Laser Deposition System

In Line Sputter System for Low E Glass Pilot Run

In Line Sputter System for CIGS Sola Cell

KGC RESOURCES SDN BHD

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